

Capturing EMI teachers' linguistic needs: a usage-based perspective

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Abstract

Drawing on usage-based approaches this paper addresses the challenge of capturing EMI teachers' linguistic needs for the purposes of teacher training in international Medical Education.

The focus is on EMI medical teachers in various instructional formats. Each format requires a specific linguistic repertoire resulting dynamic interactions of linguistic, didactic, and intercultural competence, which is difficult to define in linguistic modules such as syntax and lexicon. Moreover, a generic native speaker standard of language proficiency is questionable in this ELF context. Capturing the relevant EMI competence as linguistic units that can be taught in teacher training programs is therefore a challenge.

The paper builds on central tenets shared by a number of usage-based approaches to propose that linguistic units of EMI competence can be conceptualized as highly specific language functions arising from a specific EMI instructional context and mapping onto suitable formulations in ELF.

This conceptualization was applied in a local teacher training initiative. First, subject-specific language functions were identified through a combined analysis of the EMI instructional context and the teachers' instructional practices. Second, the identification procedure formed a starting point for a collaborative teacher training program. Third, a policy document was drafted, taking into account institutional limitations.

Keywords: English-medium instruction (EMI), language functions, English as a lingua franca, usage-based approach, teacher training

1. Introduction

Recent efforts to internationalize European Higher Education have resulted in a number of study programs taught in English by primarily local university teachers to an international student audience (Doiz, Lasagabaster and Sierra 2012). This creates rich multilingual and multicultural environments embedded in the local culture with local perspectives on learning, which can clash with perspectives brought to the process by international students (Valiente 2008). Teaching in these contexts therefore requires not only subject-specific didactic expertise and English language proficiency, but also awareness of different academic cultures that students bring to the process. All these skills are crucial for ensuring quality instruction and desired learning outcomes as well as positive learning / teaching relations. At all levels of international education there is an ongoing quest for good practice, manifested in various bottom-up monitoring, training, and/or certification programs (Klaassen 2008), small-scale practitioner research activities (Gulden 2011), large-scale EU-funded network projects (Lauridsen 2016) and top-down policy recommendations (European Commission 2013) aimed at quality assurance in EMI Higher Education. Therefore, one of the frequently debated aspects of EMI Higher Education is the kind of competence needed for teaching in these contexts, how it can be captured in linguistic terms, and how it can be taught to EMI teachers in teacher training programs.

However, practice shows that EMI teaching competence is extremely difficult to define in linguistic terms – and therefore difficult to monitor, train, and/or certify. These difficulties stem largely from four broad areas. Firstly, the competence is most often defined as generic English language proficiency and measured against a native speaker standard (Gundermann 2014), which is not feasible and not appropriate in what is

essentially an English-as-a-lingua-franca context (Seidlhofer 2011). Secondly, it is unclear what aspects of language are relevant here, as EMI competence is difficult to capture in traditional and generic categories of lexicon and grammar, and university teachers tend to have solid command of their subject-specific vocabulary. Thirdly, it has become clear that EMI teaching competence emerges from interactions of language, pedagogy, and culture - fittingly referred to as the EMI Bermuda triangle (Lauridsen 2014). Finally, there is an important aspect of educational practice that must not be overlooked: there is pressing need for EMI teacher training programs to be resource-effective and tailored to teachers' specific needs (Smiskova, Haines and Meima 2011).

In sum, descriptions of EMI teachers' linguistic needs for the purposes of teacher training programs must reconcile several highly complex aspects. They must be able to capture the complexity of EMI Bermuda triangle (linguistic descriptions of EMI competence need to be holistic and have the potential to include aspects of pedagogy and culture), while at the same time tackling the issue of the linguistic norm; they must be meet the needs of a specific instructional context while in principle being transferable across instructional contexts; and they must lend themselves well to teacher training programs. This paper proposes that a usage-based approach offers a useful way of addressing this challenge.

The paper is structured as follows. Section 2 discusses how a usage-based approach can build on and refine previous research on teaching discourse in order to capture EMI teachers' linguistic needs. Section 3 describes an application of the usage-based approach in a local EMI teacher training initiative. Section 4 considers the implications of this paper for applied practice and proposes areas for further research.

2. EMI teachers' linguistic needs from a usage-based perspective

This paper builds on fundamental premises shared by a number of linguistic approaches falling under the general umbrella term “usage-based”; primarily constructional approaches (Ellis and Cadierno 2009) and Cognitive Linguistics (Langacker 2016, 2001; Robinson and Ellis 2008). While different usage-based approaches each have a slightly different research focus, they all integrate the cognitive and the social aspects of language when studying its structure and use (for a comprehensive overview of different usage-based approaches see Butler and González-García 2014). Although a number of usage-based premises are relevant here, this paper utilizes four premises (outlined below) that most directly build on and refine previous research on teaching discourse in order to better capture EMI teachers’ linguistic needs.

(1) Units of language are pairings of form and function (also called constructions or symbolic units) which are a direct reflection of language users’ communicative intentions. Following this premise, EMI teachers’ linguistic needs should be identified on the basis of function, and function should be the starting point for linguistic analysis. Since EMI teachers’ communicative intentions are primarily determined by the functions of teaching discourse, this approach has the potential to target EMI teachers’ linguistic needs more directly and in linguistic units that are more holistic than traditional language modules such as syntax and lexicon. Although there are functional descriptions of teaching discourse, they aim to be useful across instructional formats and disciplines. Therefore, functions are identified on the basis of common linguistic features, and specific instances of language used in specific contexts are grouped under more generic functional categories. For instance, in Higher Education lecture contexts, Simpson-Vlach and Ellis (2008) provide a list of pedagogically useful academic formulas (The Academic Formula List) organized into functional categories such as *referring to factual knowledge*; Suviniity (2012) lists interactional features such

as *directives* and *requests*; and Deroey and Taverniers (2011) identify communicative functions and speech acts such as *informing*, *describing* and *demonstrating*. In primary and secondary education class contexts, Dalton-Puffer (2013) proposes the construct of Cognitive Discourse Functions (CDFs) - for instance *classify*, *evaluate* and *explain* – capturing functions crucial in a range of different Content and Language Integrated Learning (CLIL¹) subject classes. In sum, existing functional descriptions of teaching discourse are only useful to a certain extent for the purpose of capturing EMI teachers' linguistic needs, as they describe teachers' communicative intentions in rather generic terms and across instructional contexts.

(2) The function of language units is determined by the immediate context in which they are used. Therefore, linguistic analysis and linguistic descriptions must take into account the context of use – in this case, the specific EMI instructional context. Previous studies of teaching discourse have indeed highlighted the necessity of considering the specific educational context as traditional generic categories are less helpful in subject-specific instructional contexts (Deroey and Taverniers 2011; Knapp 2011). For instance, as Deroey and Taverniers (2011) found, the function of *informing* and its sub-functions of *describing* and *demonstrating* are indeed widespread features of lecture discourse; however, lecturers in different disciplines will have to inform about, describe, and demonstrate very different things. Similarly, Dalton-Puffer (2013) notes that CDFs have different instantiations in different CLIL contexts: for instance, a student in mathematics may *evaluate different solution paths* (236), which is an

¹ CLIL is associated with primary and secondary education, and has a dual pedagogical aim of teaching subject-specific content as well as second/foreign language. The challenge is the true integration of the two and its holistic conceptualization that could be translated into linguistic terms (Dalton-Puffer 2013).

instantiation of the generic CDF category EXPLAIN and its more specific member *express cause/effect*. Therefore, in order to capture the exact linguistic needs for these different contexts, we need to know what it is that teachers have to – for example - *describe* or *demonstrate*. Moreover, previous research has mostly focused on traditional frontal lectures, which is only one of many possible instructional formats in European Higher Education: current university teaching generally aims for more active student participation and more interaction in the university classroom than is usual in the traditional frontal lecture (Knapp 2011). This refinement is crucial in capturing EMI teachers' linguistic needs as it directly targets their communicative intentions. Therefore, contrary to previous studies, the present approach aims to identify functions specific to each instructional format in a particular discipline (here, Medical Education) rather than functions common to all instructional formats and across disciplines.

(3) Language units as form-function pairings can be identified at all levels of discourse. This means that in addition to morphemes, words, phraseological chunks and phrases, also larger stretches of discourse and whole speech events can have a single coherent function. Deroey and Taverniers (2011) identified larger stretches of lecture discourse which had an overall function in the educational context but which also inherently included embedded functions because they consisted of several utterances. For instance, when the identified overall function of a discourse stretch is to *exemplify a method to make a metal derivative of an organic compound*, it also includes embedded and more generic functions such as *signalling the example*, *hesitating*, *establishing interactivity* (Deroey and Taverniers 2011, 132). Similarly, the function of *giving effective feedback* in Medical Education equals a speech event that involves not only the teacher as the provider of the feedback, but also the student as the receiver of the feedback and, if applicable, the whole learning group (Smiskova and Wrigley 2009).

Therefore, the recognition that also larger stretches of discourse can have a single function is crucial for linguistic analysis of EMI teacher competence as it accommodates the structure of teaching discourse.

(4) Linguistic norms are viewed as conventions emerging in a given language community, rather than being determined by an abstract native speaker standard. Seen in the light of previous research on teaching discourse as well as EMI teacher training practice, this premise has crucial implications. The usage-based notion of linguistic norms as conventions is compatible with English-as-a-lingua-franca perspectives (Alptekin 2015), a central sociolinguistic concept in international Higher Education, which strongly questions the appropriateness of the native speaker norm that is often applied in these contexts (Gundermann 2014). However, this premise also brings about a certain complication for the applied practice. EMI teachers have to use ELF effectively in order to facilitate learning in ways relevant to their subject-specific instructional formats; and to maintain positive relations among the EMI learning community (Knapp 2011). In that sense, a certain degree of target-likeness in terms of acceptability of expression is desirable. As opposed to conventionalized expressions which are the “normal ways of saying things” (Langacker 2008), “awkward ways of saying things” (Smiskova, Verspoor and Lowie 2012) can have various effects, ranging from simply awkward to ambiguous or even offensive. At the same time, what is acceptable is difficult to determine; and in that sense, an abstract native-like standard may be seen as a more straightforward measure, even if less valid. Still, in general terms, the appropriate ways of expression in ELF can be determined by how well they meet the EMI teachers’ pedagogical aims in the EMI context. One might then have to keep an eye on clarity (potential for misunderstanding), efficacy (one clear phrase instead of an incoherent stretch of discourse) and formulations that can come across as

impolite (based on differences in communicative conventions in different languages). Moreover, ELF speakers are not only interested in communicating a message, but also in expressing themselves in concise and elegant ways (Albl-Mikassa 2013). Therefore, the appropriate ways of expression in ELF are highly context-dependent and should be identified together with the EMI teacher (Deroey and Taverniers 2011).

In sum, a usage-based approach is appropriate here because it both builds on and refines existing research on teaching discourse, it is able to accommodate English-as-a-lingua-franca perspectives; and most crucially, it can leverage the complexity of the EMI context in order to produce linguistic descriptions. The complexity is then viewed as a defining factor, rather than a complicating factor.

The linguistic units of EMI competence for the purposes of EMI teacher training **can therefore be conceptualized as specific language functions arising from a specific EMI instructional context** and mapping onto suitable formulations in ELF. The EMI teachers' needs, therefore, are to identify those specific functions and appropriate ways of phrasing them in ELF.

3. Capturing EMI teachers' linguistic needs: an example from Medical Education

This conceptualization informed a pilot teacher training initiative at the University Medical Centre Groningen (The Netherlands) aimed at capturing the linguistic needs of local EMI medical teachers in order to support them in teaching their specific subjects through ELF to international students on a local EMI medical program. The pilot was set in motion in spring 2009 by the Institute for Medical Education, which at the time was responsible for curricular design, management, and quality assurance of the

International Bachelor in Medicine Groningen (IBMG), the focal EMI study programme here, and lasted approximately 3 years.

The pilot was conceived as solution-oriented practitioner research (Allwright 2003) based on multidisciplinary collaboration between a team of specialists in Medical Education and Applied Linguistics, and local EMI medical teachers in the IBMG (Smiskova, Haines, and Meima 2011). Since the University Medical Centre Groningen is a vibrant and complex environment, the pilot could only be loosely structured, as at any point it had to adapt to various institutional limitations. Over the 3 years, roughly 100 local medical teachers of five different instructional specializations (different teacher types) participated in the training.

Over the 3 years of its duration, the pilot involved two interrelated areas of activity that tended to take place simultaneously and benefited from each other. The first area was the identification of EMI language functions for each type of medical teacher, based on detailed specification of the EMI instructional context and collaborative analysis of the teachers' instructional practices. The second area of activity was the design and implementation of a teacher training programme, which was built primarily around the EMI language functions. The following sections describe the procedure in more detail.

3.1. Specifying the EMI instructional context

At the outset of the pilot, the medical teachers were grouped by their specific EMI instructional context – or, in other words, by teacher type - and thereby according to shared needs. For each type of medical teacher, the EMI instructional context was specified on the basis of IBMG curricular documents and existing teaching guidelines in terms of subject-specific content, subject-specific didactic procedures, teacher roles, and the likely instructional scenarios with respect to the make-up of the international student

cohort (detailed descriptions of the focal EMI study program can be found in Bos and van Trigt 2009).

In its broader educational context, the IBMG was informed by five principles stemming from social-constructivist educational philosophy (Bos and van Trigt 2009); namely, that learning should be constructive (in this case, medical students were encouraged to mobilize their existing knowledge), contextualized (students were learning subject-specific content on real-life medical cases), collaborative (students were learning together and from each other) and self-directed (students were encouraged to take ownership of / manage their own learning). These broader learning principles translated into different types of instructional formats, typically based around small groups and highly specialized didactic procedures that facilitate this type of learning - such as Tutor / PBL Groups (teaching of factual knowledge through Problem-Based Learning), Coach Groups (teaching professional behaviour and medical ethics), Mentor Groups (teaching medical research), and interactive frontal lectures teaching specialized medical skills (such as the Clinical Reasoning Lecture). At the time of the pilot, some of the didactic procedures related to these different instructional formats (such as Problem-Based Learning) were described in detailed didactic steps (Smiskova 2012; Moust, van Berkel, and Schmidt 2005). In those cases, the specification of the EMI instructional context as it was largely based on existing didactic guidelines. Other instructional formats were described only in more or less generic pedagogical goals (Coach Group, Clinical Reasoning Lecture). In those cases, the context specification drew primarily on the broader social-constructivist learning principles underlying the IBMG curriculum.

3.2. Analyzing EMI teachers' instructional practices

For each teacher type, samples of subject-specific instructional practices were collected as audio recordings and/or observation notes during actual teaching and during teaching role-plays. These were then analysed together with the teachers - in focus groups, post-teaching feedback sessions, and in training sessions – with the aim of identifying the lecture-specific functions the teachers were intending to express. This collaborative analysis was guided by the previously specified instructional context, and by expert teacher opinion in cases of limited teaching guidelines. Particularly illuminating in this regard were phrases and stretches of discourse that appeared to be challenging for the teachers in terms of formulation in ELF and/or pedagogical effectiveness. This often meant that the relevant didactic procedures were not specified in enough detail or had not yet been developed. However, even roles and procedures that were described in great detail still lacked some very relevant functions, often with respect to the culturally diverse character of the EMI context; or, they listed functions that are fairly generic and applicable across contexts and in that sense less helpful. The identification of specific functions was more straightforward in cases where the instructional context was specified in detail by the subject-specific didactic procedures, as well as the likely scenarios that can arise during those procedures (such as *facilitating a brainstorm* and *dealing with a difficult brainstorm* in a Problem-Based Learning group; Wrigley and Smiskova 2009).

The analysis of teachers' instructional practices was therefore valuable for all teacher types, either as a supplement to an existing list of (generic) functions already included in teaching guidelines, or as the only source of functions. Although the identification procedure was carried out for the full range of more or less established instructional formats in the IBMG study program, the scope of this paper only allows a closer look at one instructional format, namely, the Clinical Reasoning Lecture.

3.3. Identifying specific EMI functions: the Clinical Reasoning Lecture

This was the most challenging instructional format in terms of identification procedure and the most productive one in terms of newly identified specific functions. At the time of the pilot the local teaching guidelines for the Clinical Reasoning Lecture were under development and the Clinical Reasoning teachers were not yet in complete agreement as to the exact didactic procedure (“clinical reasoning is seemingly as difficult to define as it is to teach”; Linn et al 2012, 18; Gruppen, 2017). As the teachers were forced to improvise in ELF when teaching and role-playing the lecture, and then to collaboratively negotiate and agree on every step of the lecture, this was the perfect ground for the identification of the lecture-specific functions. For this particular instructional format, the identification procedure was carried out with four specialized medical teachers who at the time were responsible for teaching Clinical Reasoning.

Table 1 shows all 11 functions identified for the Clinical Reasoning Lecture during the teacher training initiative. Each function is listed together with examples of teacher language. Note that the number of examples differs per function, as some functions were expressed more often, while others only once. For ease of reference, all 23 examples of teacher language are numbered consecutively, regardless of which function they represent.

Table 1. Clinical Reasoning Lecture: lecture-specific functions and teacher language

Describing the procedure for the clinical reasoning lecture

- (1) Clinical reasoning is meant to be interactive, it is an interactive teaching method. There is a expert and there is a chair. The chair is always going through the audience, asking questions about the medical history and about the several points of the normal consult pattern. And the expert is always at the end commentating, is the medical history right taken, was the physical examination thorough, complete.

- (2) The referent is...will write those... questions... and answers on the... on the blackboard or... whiteboard and will give comment on... will give comment of it... is it...well, right, is it relevant... the relevant question or or non-relevant question en will... give some explanation.

Introducing a case for clinical reasoning

- (3) Well, ehm, clinical reasoning, patient with shoulder pain. Uuuh this afternoon uuh we are discussing Mr. Bloomfield, he's a 50 year old man and he comes to your office, you are uhh in the position of general practitioner, you're sitting in your surgery, you're sitting in your office and there's Mr. Bloomfield, he has made an appointment and uuuh he has a painful right shoulder. Dit is what your uuuh secretary had told you, en uuh well, here he well here he comes

Giving instructions for individual steps in clinical reasoning

- (4) Well, first perhaps, question now is what would you ask more ... do you want to have more information ... and tell me, why do you want that information, what was your thoughts behind dit question.

Generating an initial hypothesis

- (5) What are the, well, the first hypothesis that you got in mind when, well, Mr. Bloomfield, 50 year old, you know him, from, well, not many cases, he was not a very re- he's not a very regular patient but...
- (6) What are the, well, what do you think, in the first opinion, about this...
- (7) Can you give an diagnosis? What do you have in your head?
- (8) just...just what is going on in your head, a theoretical case
- (9) What are the, well, what do you think, in the first opinion, about this...what are the possibilities?

Facilitating students' clinical reasoning

- (10) Have you any suggestions?
- (11) So what do you want to ask Mr. Bloomfield?
- (12) What do you miss in this summary?
- (13) are there no...are there other questions to...we must put to...Mr. Bloomfield at this stage...we asked about movement pain, we ask about...well, trauma, but not...

Making reasoning visible / accessible

- (14) Why is it for you an important question, what is the meaning of asking?
- (15) And you are putting those questions because you are thinking – is it intrinsic or extrinsic.

(16) Perhaps Peter can tell us what is his thinking about this.

Eliciting factual knowledge

(17) So, we've got several possibilities for the intrinsic part and we've got several possibilities from the extrinsic part. What kind of possibility are in the extrinsic...area? Do you have...?

Guiding students towards specification

(18) When you say, well, it's an joint problem, intrinsic problem, what are the, well, possibilities when you say it is an intrinsic problem?

(19) What do you think, what are the diagnosis? The possibilities?

Acknowledging students' contributions

(20) I'm glad with Peter's remark.

Clarifying

(22) So what you're saying is that in the knowledge of this patient you make already...some steps in, well, in the...diagnosis that is most likely.

Rounding off the clinical reasoning case

(23) Well, thank you for this round. I would like to have... refer to a theoretical system of patient characteristics of shoulder pain, so this is more the...well, the academic, well, what do we know about...about shoulder pain

These examples illustrate the usage-based premises regarding linguistic structure that have informed the identification of the functions; the related complexities pointed out by previous research on EMI language use; and the argument that lecture-specific functions target the teachers' linguistic needs more directly than generic functions.

Firstly, the functions clearly work at different levels of discourse structure. While some functions may only require one or two phrases (example 20), others by definition require a long stretch of discourse (examples 1 and 3) and the ability to effectively select, highlight and structure information in order to successfully facilitate

learning. For instance, rounding off (example 23) could be achieved with the generic phrase “Well, thank you for this round”; however, the lecturers clarified that rounding off the Clinical Reasoning Lecture should also include a brief summary or reference to the factual content related to the medical case (here, shoulder pain). Moreover, in some functions there is embedding at different levels structural levels. For instance, in example 22 the generic phrase “so what you’re saying is that” already serves the function of *clarifying*; however, the more crucial part of that function is the actual subject-specific content that the teacher is aiming to clarify and seems to be struggling with (“in the knowledge of this patient you make already...some steps, well, in the...diagnosis that is most likely”). In sum, the primary determining factor for what functions are needed and how they should be realized at different levels of discourse structure is clearly the subject-specific didactics (here, the Clinical Reasoning Lecture).

Secondly, the identified functions show different specificity of meaning as well as hierarchical relationships. While some are indeed specific to the Clinical Reasoning Lecture (such as *generating an initial hypothesis*), others are applicable across instructional formats (such as *acknowledging students’ contributions*). The more specific functions identified here can be subsumed under the more generic functions identified by previous studies of teaching discourse: for instance, *describing the procedure for the clinical reasoning lecture* can be categorized as the broader function of *informing* and its sub-function of *describing*; similarly, the specific function *finding out about the students’ reasoning* could be classified as *interacting*, sub-function *involving the audience* (Deroy and Taverniers, 2011). However, even this greater level of specification may still be too broad to capture the the teachers’ needs. For instance, the function of *facilitating students’ reasoning* was identified here on the basis of four examples of teacher language (examples 10-13); but each of the four examples was used

at a different stage in the clinical reasoning process and targeted different aspects of the medical case. Breaking this particular function down into components that correspond to the different stages of the facilitation and probe different aspects of the case would be even more helpful for the teachers (note that, as a result, the number of functions identified for the Clinical Reasoning Lecture could easily be at least doubled).

Finally, these examples also show the tricky issue of conventionalization, and what counts as an appropriate and effective formulation in the EMI teaching context. As instances of ELF use, the teachers' linguistic realizations of these functions are not erroneous with respect to the individual grammatical and lexical elements; and in theory, any ELF formulation can potentially become conventionalized, serve its function well, and become widespread in the given EMI community. However, in terms of meeting the teachers' subject-specific pedagogical aims (here, teaching Clinical Reasoning) as well as more general personal aims as ELF speakers (such as expressing oneself with conciseness and elegance) some of these formulations are less suitable and need revision. For instance, the longer stretches of discourse in examples 2 and 3 lack clear organization, coherence and consistency, obscuring the teacher's communicative aims (i.e., the subject-specific functions; here, *describing the procedure for the clinical reasoning lecture; introducing a medical case for clinical reasoning*) as well as the subject-specific content (here, the individual steps in the Clinical Reasoning procedure; the specifics of the medical case). Yet again, these examples highlight the need to identify both the subject-specific functions as well as the appropriate ELF formulations together with the specialized EMI teacher.

3.4. Towards a teacher training programme

The conceptualization of the teachers' linguistic needs and the identification procedure for the subject-specific functions were integrated into (and benefited from) the second main activity of the pilot, a local teacher training program aimed at training and supporting medical teachers in teaching their specific subjects through ELF to international students on the IBMG study program. To ensure meaningful and effective teacher development, the teacher training program followed the same social-constructivist learning principles as the IBMG study program: the teacher training took place within the actual teaching context (principle of contextualized learning), the teachers were learning together and from each other (principle of collaborative learning); they were encouraged to identify their own needs, reflect on their own learning, and formulate their own developmental goals (principle of self-directed learning); and they built on their own knowledge, experience and competence (principle of constructive learning).

In the first part of the teacher training program (To get going: the “what”), the different types of medical teachers were informed by the curriculum coordinators about the content they were invited to teach on the IBMG study program; and, if available, the didactic procedures they were expected to follow. For instance, medical teachers acting as Tutors in PBL groups in Block 1.2 of the IBMG were issued a teaching manual on Infection and Immunity (the content scheduled for that Block), which also contained a description of the PBL didactic procedure.

In the second part of the teacher training program (Training: the “how to”), the teachers met in training sessions together with the programme instructors and role-played their specific teaching procedures in ELF; they also had their actual teaching observed, followed by focus groups and one-to-one feedback sessions. Throughout all these activities, the teachers were guided by the programme instructors in the analysis

of their own specific instructional context, the clarification of subject-specific language functions, and the identification of suitable formulations in ELF. For instance, in the Clinical Reasoning Lecture focus group led by one of the programme instructors the teachers clarified the subject-specific functions by analysing both their role-play and their actual teaching, and reflected on their ELF formulations of those functions. Through awareness-raising discussions in the focus group the teachers realized that some of their formulations may lead to misunderstanding and compromise pedagogical effectiveness. The programme instructors then suggested alternative wording for individual phrases so that the teacher's communicative aims became clear (such as "What are your thoughts?" to replace the rather unconventional expression "What do you have in your head?" used by the teachers to *generate an initial hypothesis*; see Table 1, example 7).

As part and outcome of the training programme, training manuals were designed for different subject-specific instructional formats - or, in other words, for different local types of medical teacher; primarily for PBL Tutors (Smiskova 2012a; Smiskova and Wrigley 2008) and Professional Development Coaches (Smiskova 2012 b; Wrigley and Smiskova 2009). The manuals facilitated the functional analysis of each instructional format with the help of scripted role-plays; they listed subject-specific functions together with suggestions for suitable phrasing in ELF, and provided space for additionally identified functions.

All aspects of the training involved an academic culture component, based on critical incidents encountered by the teachers in their specific instructional formats. Such critical incidents were often related to various aspects of culture-based group learning behaviour (for instance speaking up individually in a group and voicing critical opinions) which in some way interfered with successful learning within a particular

instructional format. For instance, the training manual for Problem-Based Learning Tutors included a scripted role-play for an instructional scenario where the PBL group is not following the prescribed learning procedure. As a result, the PBL tutor has to intervene in order to *encourage the quiet student to contribute and deal with the dominant student* (Wrigley and Smiskova 2009).

In the last part of the training programme (To encourage), the teachers were encouraged to take ownership of this process, both individually and as a group, and were guided to gradually build a supportive and collaborative community of practice. They met in so-called briefing sessions where they collaboratively addressed challenging moments in their teaching. They also received support on demand in the form of teaching observation focused on the use of ELF and intercultural communication.

In an effort to institutionalize the training initiative as a fully-fledged training program, an internal policy document was drafted outlining its principles and procedures as well as the specifics for each type of medical teacher. However, due to various institutional pressures (including the medical teachers' workload, as most of them performed teaching in addition to clinical work and research) the scope of the initiative had to be narrowed down. After the initial stage which established the teachers' EMI linguistic needs, there was a demand for subject-specific "phrase-banks" (lists of specific functions with suitable formulations in ELF), so that the identification procedure and its infrastructure (focus groups, teaching observations, feedback sessions) could be left out.

5. Conclusions and suggestions for further research

The aim of this paper was to propose that a usage-based perspective can usefully inform descriptions of EMI teachers' linguistic needs for the purpose of EMI teacher training programs, illustrating this on a local teacher training initiative in EMI Medical Education. The proposed usage-based conceptualization of the teachers' linguistic needs and its application to teacher training programs can potentially be utilized in similar EMI contexts. However, to enable rigorous interdisciplinary research into EMI teachers' linguistic needs, the proposed approach has to be further refined. This section explores some implications for applied practice as well as for further research.

Firstly, program designers and instructors may find the approach attractive because it is potentially transferrable to other EMI teacher training programs: the principle of specifying the EMI instructional context and identifying the specific functions that are needed in that context is applicable not only in Medical Education, but also in other disciplines. Moreover, the approach targets EMI teachers' needs directly, which makes it potentially more resource- and time-effective than traditional English language courses teaching generic English proficiency (Klaasen 2008). The inclusion of the EMI teachers themselves in the whole process also contributes to the overall effectiveness of the approach: building on the teachers' expert knowledge of their specific EMI instructional context results in less pressure on program instructors to have in-depth subject-specific knowledge (Wilkinson 2008).

Secondly, EMI teachers across disciplines may also find the approach beneficial. Contrary to most language learning courses, which tend to work with native speaker standards and focus on correct forms and minimizing errors, this approach is strongly focused on communicative aims (here, meeting the pedagogical aims and maintaining positive relations in the EMI educational community). Moreover, being involved in co-constructing the training program may be an empowering and motivating factor for the

teachers' further development. This was indeed the case in the focal EMI context, where medical teachers informally reported that they felt more confident and relaxed when speaking, more focused on conveying the message and less anxious about making mistakes. Systematic investigations of the teachers' attitudes to the training program (Klaassen 2008) as well as EMI students' perceptions of the teachers' EMI competence (Hellekjær 2010) would be valuable sources of knowledge for further refinement of the present approach.

Thirdly, the usage-based conceptualization of the EMI linguistic needs allows for the inclusion of cultural aspects. Since the specifics of the EMI instructional context also include the specifics of the interactants in that context (teachers and students), these must also be included in the identification of the relevant functions and their suitable formulations in ELF. Well-described differences in educational cultures may offer a starting point for the inclusion of the culture aspect in the EMI context. For instance, Problem-Based Learning is essentially based on Western, Socratic educational philosophy, which assumes that learning is best achieved through critical thinking. The Problem-Based Learning instructional format is therefore built around a critical analysis of a medical case, whereby students acquire factual knowledge related to the case. This premise is in direct opposition to Eastern, Confucian learning philosophy, where knowledge is thought to be acquired by first imitating someone who has already mastered that knowledge; and being critical in early learning stages is inconceivable (Valiente 2008). In EMI small-group instructional formats these differences may lead to the phenomenon of "the silent student" and "the over-talkative student", depending on the student's culture-based educational background and the unfolding of the group dynamics. In such instructional situations, the EMI teacher may find useful the specific functions of *encouraging the silent student to contribute, dealing with the dominant*

student and encouraging group discussion (Wrigley and Smiskova 2009). However, even this pedagogically based approach to including culture into the equation has to be further refined and applied cautiously. The culture aspect of EMI competence is a vastly complex phenomenon that may easily invite cultural stereotyping; and what is culturally appropriate may be highly individual (Knapp 2011).

Finally, to enhance its contribution both to the applied purpose and to usage-based research, the present approach will benefit from rigorous conceptual and methodological refinement. For instance, in conceptualizing and identifying the specific functions it would be beneficial to go beyond purely verbal manifestation, which is most commonly used in functional analyses of teaching discourse (Deroey and Taverniers 2011), and include also non-verbal forms, such as prosodic features and pauses. Conversation-analytical methods would provide useful tools here, which would necessitate the inclusion of students as participants in instructional interactions (Knapp 2011). Also, because the functional analysis can be based on the institutionalized nature of teaching interactions (the communicative intent is pre-determined by the pedagogical goals and didactic procedures), and the structure of the discourse in instructional contexts reflects to a great extent the underlying didactic structure, EMI instructional practices offer a rich source of data that can contribute to the development of theoretical and empirical research on discourse structure within Cognitive Linguistics (Langacker 2016; Tenbrink 2015; Kochanska 2014). If this line of research is pursued in the EMI Higher Education context, it could build on a similar and very promising trend in CLIL contexts: Dalton-Puffer's (2016) construct of Cognitive Discourse Functions (CDFs) is built on the integrative consideration of a range of premises originating from (or compatible with) discourse- and cognitive-functional linguistic theories. Finally, exploring potential overlaps with sociolinguistic approaches in the areas of ELF

(Alptekin 2013), relationships between micro and macro scales of educational contexts (Hult 2010), and language policy and planning (Hornberger and Johnson 2007) would also make valuable contribution to usage-based research.

The scope of this paper only allows for a brief introduction to the proposed usage-based approach, and a generic description of the local training initiative in which it was implemented; many important aspects could thus only be considered in passing. However, I hope to have shown that the approach is potentially beneficial for both the target applied practice – English-medium Instruction (EMI) university teaching and EMI teacher training - as well as for future research within the broader area of usage-based linguistics.

Funding details

This work was partly supported by the Research Council of Norway through its Centers of Excellence funding scheme, Project Number 223265.

List of acronyms

- CDFs Cognitive Discourse Functions
- CLIL Content and Language Integrated Learning
- ELF English as a lingua franca
- EMI English-Medium Instruction
- IBMG International Bachelor Medicine Groningen
- PBL Problem-Based Learning

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